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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/606,003 | 06/24/2003 | Samir S. Ahmad | H0004229 | 5987 |
| 7590 | 04/28/2004 | | | |
| Ephraim Starr Division General Counsel Honeywell International Inc. 23326 Hawthorne Boulevard, Suite #200 Torrance, CA 90505 | | | EXAMINER TRIEU, THAI BA | |
| | | | ART UNIT 3748 | PAPER NUMBER |

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,003

Applicant(s)

AHMAD, SAMIR S.

Examiner

Thai-Ba Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 15, 16, 17, 19, 20, 22, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 3,5-14,18,21,23 and 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/24/03 & 11/24/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim, being after claim **12**, should be numbered **13**. Additionally, claims **14-25** should be renumbered **15-26**.

Additionally, in claim **14**, line 1, "**12**" after "**system of claim**" should be replaced by **--13--**; in claims **17-25**, line 1 should be corrected by following:

[[17.]] **18**. The method of claim [[16]] **17**, wherein ...

[[18.]] **19**. The method of claim [[16]] **17**, wherein ...

[[19.]] **20**. The method of claim [[16]] **17**, further comprising...

[[20.]] **21**. The method of claim [[16]] **17**, wherein ...

[[21.]] **22**. The method of claim [[16]] **17**, wherein ...

[[22.]] **23**. The method of claim [[16]] **17**, wherein ...

[[23.]] **24**. The method of claim [[16]] **17**, further comprising...

[[24.]] **25**. The method of claim [[16]] **17**, further comprising...

[[25.]] **26**. The method of claim [[24]] **25**, further comprising ...

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 15-17, 19-20, 22, and 24-25 are rejected under 35 U.S.C. 102(b) as best understood as being anticipated by Dellora (Patent Number US 5,440,879, or EP 0 599 321 A1).

Regarding claims 1-2, 4, 15, 17, 19-20, and 24-25, Dellora discloses a controlling a variable-geometry mechanism in a turbocharger for an engine, comprising:

a logic arrangement structured and arranged to sample a desired control value representing a desired operating condition in which the turbocharger is to be operated, and

to sample a previous desired control value representing the desired control value determined in a previous sample period,

the logic arrangement being further structured and arranged to determine a first difference parameter as the difference between the desired control value and the previous desired control value and to produce a control signal output based on said first difference parameter, such that the control signal output has a first value when said first difference parameter is greater than a predetermined first threshold and

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has a second value different from the first value when said first difference parameter is not greater than the predetermined first threshold (See Figure 2, Column 1, lines 25-52, Column 3, lines 45-61, Column 4, lines 1-67, and Column 5, lines 1-42);

wherein the logic arrangement is structured and arranged to provide the first value as a pulse of predetermined amplitude and duration (See Figure 2); and

wherein the logic arrangement is structured and arranged to determine the amplitude and duration of the pulse as a function of said first difference parameter (See Figure 2, Column 1, lines 25-52, Column 3, lines 45-61, Column 4, lines 1-67, and Column 5, lines 1-42); and

wherein the logic arrangement is structured and arranged to cause the control signal output to have the second value upon expiration of the duration of the pulse (See Figure 2, Column 1, lines 25-52, Column 3, lines 45-61, Column 4, lines 1-67, and Column 5, lines 1-42); and

an actuator (31) operable to adjust the variable-geometry mechanism, the actuator being arranged to receive the control signal output from the logic arrangement (See Figure 2, Column 2, lines 32-42).

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Regarding claim 16, Dellora discloses a control system for a variable-geometry turbocharger, comprising:

a logic circuit having a first input (40 connecting with 50), a second input (44 connecting with 50), and an output (S to 31), the logic circuit being structured and arranged to calculate a difference between the first and second inputs and to selectively provide either a first value or a second value to the output depending on the value of said difference, the logic circuit being further structured and arranged to produce a pulse control signal;

means for providing a desired control signal to the first input (See Figure 2);

means for providing a previous control signal to the second input (See Figure 2);

a controller (2) structured and arranged to provide a normal control signal (See Figure 1);

a switch (50) receiving the normal control signal and the pulse control signal and having a switch output, the switch being responsive to the logic circuit output and providing the pulse control signal to the switch output (S) responsive to the first value on the logic circuit output and providing the normal control signal to the switch output (S) responsive to the second value on the logic circuit output (See Figure 2); and

an actuator (31) connected to the switch output (S), the actuator operable to adjust a variable-geometry mechanism of the turbocharger (See Figure 2, Column 1, lines 25-52 and 66-67, Columns 2-4, lines 1-67, and Column 3, lines 1-48).

Regarding claim 22, Dellora further discloses the second value is determined as a function of engine speed (N) and fueling rate (FR) of the engine.

Allowable Subject Matter

Claims **3, 5-14, 18, 21, 23, and 26** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The IDS (PTO-1449) filed on June 24 and November 24, 2003 have been considered. Each initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Schmid (US Patent Number 6,510,691 B1) discloses a method for regulating or controlling a supercharged internal combustion engine.
- Arnold (US Patent Number 6,681,573 B2) discloses methods and systems for variable geometry turbocharger control.
- Schultalbers et al. (US Patent Number 5,782,092) disclose an arrangement controlling the output pressure of a turbocharger for an internal combustion engine.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
April 27, 2004


Thai-Ba Trieu
Patent Examiner
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